

Amendments to the claims:

Claims 1-21 (canceled)

22. (Currently amended): Isolated nucleic acid which encodes (a) a polypeptide comprising which includes the amino acid sequence of SEQ ID NO: 3 or (b) a polypeptide comprising having an amino acid sequence that is at least 90% similar thereto and exhibits the same biological function; or a shortened fragment of either which exhibits essentially the same biological prolyl oligopeptidase activity, or which is complementary to any one of the foregoing.

23. (Previously presented): The isolated nucleic acid of claim 22 which is DNA or RNA.

24. (Currently amended): The isolated nucleic acid of claim 22 which is a DNA transcript that includes the entire length of SEQ ID NO: 3 4 or which is complementary to the entire coding region of SEQ ID NO: 3 4.

25. (Previously presented): An antisense oligonucleotide directed against the DNA of claim 24.

26. (Currently amended): The isolated nucleic acid of claim 22 which is an RNA transcript which includes the entire length of SEQ ID NO: 3 4.

27. (Currently amended): An A mammalian, insect or bacterial host cell which comprises an expression vector comprising the nucleic acid of claim 22 encoding a polypeptide having the entire amino acid sequence set forth in SEQ ID NO: 3 which nucleic acid is operably linked to a promoter, said expression vector being present in a compatible host cell.

28. (Previously presented): An isolated recombinant polynucleotide molecule comprising nucleic acid according to claim 22 plus expression-controlling elements linked operably with said nucleic acid to drive expression thereof.

29. (Currently amended): A mammalian, insect or bacterial host cell that has been genetically engineered by the insertion of nucleic acid according to claim 22 which codes for ~~at least the mature~~ a protein portion of the amino acid sequence of SEQ ID NO: 3 which exhibits prolyl oligopeptidase activity.

30. (Currently amended) The process for producing a polypeptide which includes ~~the mature protein~~ a portion of SEQ ID NO: 3 exhibiting prolyl oligopeptidase activity, which process comprises culturing the host cell of claim 29 under conditions sufficient for the production of said polypeptide.

31. (Previously presented): The process of claim 30 wherein said polypeptide is expressed at the surface of said cell and further includes the step of recovering the polypeptide or a fragment thereof from the culture.

32. (Withdrawn): Isolated nucleic acid which is an alternative splice variant of SEQ ID NO: 4, and which has one of SEQ ID NOS: 24, 26, 28, 30, 34, 36, 38 and 40.

33. (Withdrawn): Isolated nucleic acid which contains is an alternative splice variant of SEQ ID NO: 4 which contains a region extending between a start codon and a stop codon that encodes a polypeptide that exhibits prolyl oligopeptidase activity.

34. (Withdrawn): The isolated nucleic acid of claim 33 which has one of SEQ ID NOS: 24, 28, 34 and 36.

35. (Currently amended): Isolated nucleic acid which encodes a polypeptide comprising, ~~which includes~~ the amino acid sequence of SEQ ID NO: 3

or a shortened fragment thereof which exhibits prolyl oligopeptidase activity, or which is complementary thereto.

36. (Previously presented): The isolated nucleic acid of claim 35 which is DNA.

37. (Previously presented): An antisense oligonucleotide directed against the DNA of claim 36.

38. (Previously presented): The isolated nucleic acid of claim 35 which is an RNA transcript which includes the entire length of SEQ ID NO: 4.

39. (Canceled)

40. (Previously presented): An isolated recombinant polynucleotide molecule comprising nucleic acid according to claim 35 plus expression-controlling elements linked operably with said nucleic acid to drive expression thereof.

41. (Currently amended): A mammalian, insect or bacterial host cell that has been genetically engineered by the insertion of nucleic acid according to claim 35 which codes for ~~at least the mature~~ a protein portion of the amino acid sequence of SEQ ID NO: 3 which exhibits prolyl oligopeptidase activity.

42. (Currently amended): A process for producing a polypeptide which includes ~~the mature protein~~ a portion of SEQ ID NO: 3 exhibiting prolyl oligopeptidase activity, which process comprises culturing the host cell of claim 41 under conditions sufficient for the production of said polypeptide.

43. (Currently amended): The polypeptide comprising the ~~mature~~ protein portion of SEQ ID NO: 3 produced by the process of claim 42.

44. (New): A mammalian, insect or bacterial host cell which

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comprises an expression vector comprising the nucleic acid of claim 35 encoding a polypeptide having the entire amino acid sequence set forth in SEQ ID NO: 3 operably linked to a promoter.